# COMPARISON BETWEEN TENTATIVE ORDER NO. 2001-01 SUSMP REQUIREMENTS AND LARWQCB SUSMP REQUIREMENTS (AS SUPPORTED BY SWRCB ORDER WQ 2000-11)

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| Develop model SUSMP | F.1.b.2 | X | |
| Develop local SUSMP | F.1.b.2 | X | |
| Develop ordinances to implement SUSMP | F.1.b.2 | X | |
| Projects with prior approval not subject to SUSMPs | F.1.b.2 | X | |
| Non-discretionary projects subject to SUSMPs | F.1.b.2 | -* | *The LARWQCB SUSMP does not apply to non-discretionary projects because the SWRCB found that such requirements would be inconsistent with language found in the rest of the LARWQCB permit. These language inconsistencies do not exist in the Tentative Order. In addition, the SWRCB provided discretion for including non-discretionary projects under SUSMP requirements in later permits when it states in Order WQ 2000-11 "the Regional Board may consider expanding the development controls beyond CEQA discretionary projects when it reissues the permit."<br><br>It is necessary for SUSMPs to apply to both discretionary and non-discretionary projects in order to adequately reduce pollutants in urban runoff discharges resulting from new development. Non-discretionary projects constitute a significant portion of new development projects. Their status as "non-discretionary projects" does not ensure that they will not generate pollutants or increase flows in their post-construction or "use" phase. The SWRCB supports this in Order WQ 2000-11 when it states "the limitation of the SUSMPs to discretionary projects may not be sufficiently broad for an effective storm water control program […]." Furthermore, the inclusion of non-discretionary projects under the SUSMP requirements will not lead to SUSMP requirements being applied to insignificant projects. Only non-discretionary projects which fall under the SUSMP priority development project categories will be subject to the SUSMP requirements. |
| Significant redevelopment definition | F.1.b.2.a | X | Significant redevelopment definition is same as that in LARWQCB SUSMP |
| Home subdivisions of 100 housing units or more is a priority development project category | F.1.b.2.a.i | X | |
| Home subdivisions of 10-99 housing units is a priority development project category | F.1.b.2.a.ii | X | |
| Commercial developments greater than 100,000 square feet is a priority development project category | F.1.b.2.a.iii | X | |
| Automotive repair shops is a priority development project category | F.1.b.2.a.iv | X | |
| Restaurants is a priority development project category | F.1.b.2.a.v | X | |

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| Hillside development greater than 5,000 square feet is a priority development project category | F.1.b.2.a.vi | X* | *The LARWQCB SUSMP has "single-family hillside residences greater than 5,000 square feet" as a priority development project category. In the Tentative Order, the single-family hillside residence category was changed to "All hillside development greater than 5,000 square feet." This change was made to reflect the urban runoff concerns generated by hillside development. The primary concern regarding hillside development is the potential for on-site and downstream erosion resulting from changes in the flow regime caused by the development. While pollutants from hillside development (including single-family residences) can be significant, increases or changes in flow conditions, and the corresponding on-site and downstream erosion, provide the greatest potential for impacts to beneficial uses. Therefore, the type of development on a hillside is not at issue as much as the size of the development and the resulting changes in the on-site and downstream flow regime. For this reason, rather than focus on the type of hillside development, the SDRWQCB SUSMP requirements focus on size. The size (5,000 square feet) was chosen based on SWRCB guidance in Order WQ 2000-11, which uses a size threshold of 5,000 square feet for significant redevelopment. |
| Development within or adjacent to or discharging directly to an environmentally sensitive area a priority development project | F.1.b.2.a.vii | -* | *Environmentally sensitive areas (ESAs) were included as a priority development project category in the LARWQCB SUSMP by the LARWQCB. Inclusion of environmentally sensitive areas in the LARWQCB SUSMP was not upheld by the SWRCB in Order WQ 2000-11 for several reasons: (1) as proposed by the LARWQCB, they did not include a size threshold, and the size threshold proposed at a later date had not been part of the public process; (2) the category was not consistent with other LARWQCB permit language; and (3) environmentally sensitive areas are already subject to other regulation.<br><br>It is important to note that the SWRCB left open the inclusion of ESAs in future permits by stating: "The Regional Board may choose to consider the issue further when it reissues the permit." Furthermore, the problems the SWRCB identified with the LARWQCB ESA category do not apply to the SDRWQCB ESA category. For example, a size threshold is included in the SDRWQCB ESA category definition; this size threshold is based on CEQA size thresholds for development within ESAs, and has been subject to the public process since approximately May of 2000 (through which no other size threshold has been officially proposed). The ESA category is also consistent with other SDRWQCB permit language. Finally, while ESAs may be regulated in other situations, this regulation is often unrelated to water quality. The Tentative Order therefore seeks to compliment other regulation regarding ESAs, and fill in any gaps with regards to urban runoff and receiving water quality regulation. Also, additional regulation is appropriate, due to the sensitive nature of the areas.<br><br>The categorization of "all development and redevelopment located within or directly adjacent to or discharging directly to an environmentally sensitive area" as a SUSMP priority development project category is a necessary layer of protection for these valuable |

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| | | | resources. Each designated environmentally sensitive area (ESA) is either a valuable receiving water resource which should be protected from the impacts of urban runoff, or a degraded receiving water resource which should be protected from additional impacts. The geographic location of a development project can impact an ecologically fragile area. A sensitive habitat has a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance, and so deserves attention. In essence, a project that is ordinarily insignificant in its impact on the environment may, in a particularly sensitive environment, be significant (LARWQCB, 2000). USEPA, in discussing storm water controls, notes: "Sensitive area protection is an important element of conservation design […] These areas are particularly susceptible to degradation by storm water runoff" (USEPA, 1999a). |
| Parking lots 5,000 square feet or more or with 15 or more parking spaces is a priority development category | F.1.b.2.a.viii | X* | *The parking lot size criteria in the LARWQCB SUSMP is 5,000 square feet or more or 25 parking spaces or more. The parking lot size criteria was changed in the Tentative Order from 25 or more parking spaces to 15 or more parking spaces. This change was based on a comment from the Port of San Diego during the April 13, 2000 SDRWQCB SUSMP Public Workshop. The comment noted that the other parking lot size criteria of 5,000 square feet actually corresponded more closely with the size of 15 parking spaces, rather than 25 parking spaces. An assessment found this assertion to be correct. In order to make the two parking lot size criteria as similar as possible, the criteria for 25 parking spaces was reduced to 15 parking spaces. |
| Streets, roads, highways, and freeways is a priority development category | F.1.b.2.a.ix | - | Streets, roads, highways, and freeways were added as a SUSMP priority development project category in the Tentative Order. This is due to their potential to be a significant contributor of pollutants in urban runoff. A Federal Highway Administration "Pollutant Loading and Impacts from Highway Stormwater Runoff, Volume 3; Analytical Investigation and Research Report" (1990) finds that concentrations of total suspended solids, nitrate + nitrite nitrogen, and zinc exceed USEPA benchmark values for concentrations of these pollutants in urban runoff. Upon comparing highway runoff pollutant concentrations with general urban runoff pollutant concentrations, Horner concludes that high traffic areas should be dealt with at least as strictly as other sources of runoff, if not more strictly, and that lesser traveled roadways also deserve significant attention. He also finds that highways can be the largest contributor of loads of various pollutants when considered on a unit areas basis (Horner, 1994). Furthermore, streets, roads, highways, and freeways by definition also consist of extensive impervious surfaces, which alter flow regimes and increase potential for downstream erosion. |
| Retail gasoline outlets is a priority development category | F.1.b.2.a.x | -* | *The SWRCB removed retail gasoline outlets (RGOs) from the LARWQCB SUSMP because RGOs are already heavily regulated and may be limited in their ability to implement structural BMPs. However, the SWRCB allowed for retail gasoline outlets to be subject to SUSMPs in future permits, provided adequate justification. |

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| | | | A Western States Petroleum Association (WSPA) sponsored study, "Results of a Retail Gasoline Outlet and Commercial Parking Lot Stormwater Runoff Study ", concludes that pollutant concentrations in RGO runoff are similar to pollutant concentrations in runoff from commercial parking lots, restaurants and other urban developments that are properly regulated under federal and state storm water pollution laws. Since the threat to water quality posed by each of these pollutant source categories are similar, it follows that each category should receive the same priority ranking (because priority rankings are based strictly on threat to water quality considerations). Commercial parking lots and restaurants are high priority categories and are subject to SUSMP requirements because they pose a significant threat to water quality. Staff has recommended that RGOs also be ranked high priority and also be subject to SUSMP requirements because RGOs also pose a significant, and similar, threat to water quality.<br><br>The fact that significant discharges were found in the study indicates that the current source control measures at RGOs are not working and that structural controls are needed. Retail gasoline outlets are a well defined source of urban storm water pollutants that impair receiving waters (LARWQCB, 2000).<br><br>Use of structural controls such as filtration or treatment inserts is also technically and economically feasible. In an EPA funded study of four inserts ( "The Rouge River National Wet Weather Demonstration Project") it was concluded that, "these devices are applicable for use in gas stations … and they have a relatively low cost". The typical costs for installation of the filtering units being studied is 400 to 800 dollars with yearly maintenance costs averaging about 240 dollars per device. Staff believes these are clearly reasonable and manageable costs for facilities such as RGOs. The study also concluded that "all four filters performed well … and were relatively easy to maintain".<br><br>Regarding the ability of RGOs to implement structural BMPs, oil-water separators have been in common use at gasoline stations for many years. These separators are in essence the same as underground vaults. Safety issues have not been raised in the past concerning the potential for explosive environments to occur in separators. It is not likely that the chambers holding storm water would create any more of an explosive environment than oil-water separators or utility vaults that are also common near RGOs. |
| Implement source control and structural treatment BMPs | F.1.b.2.b | X | |
| Control peak flow discharge rates to prevent downstream erosion | F.1.b.2.b.i | X | |
| Conserve natural areas | F.1.b.2.a.ii | X | |
| Minimize pollutants of concern | F.1.b.2.a.iii | X | |

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| Remove pollutants of concern through use of structural BMPs | F.1.b.2.a.iv | X | |
| Minimize directly connected impervious areas | F.1.b.2.a.v | X | |
| Protect slopes and channels from eroding | F.1.b.2.a.vi | X | |
| Include storm drain stenciling | F.1.b.2.a.vii | X | |
| Properly design outdoor storage areas | F.1.b.2.a.viii | X | |
| Properly design trash storage areas | F.1.b.2.a.ix | X | |
| Provide proof of mechanism to ensure long-term ongoing BMP maintenance | F.1.b.2.a.x | X | |
| Include additional provisions applicable to individual project categories | F.1.b.2.a.xi | X | |
| Correctly design BMPs to remove pollutants to MEP | F.1.b.2.a.xii | - | This requirement was included to ensure that BMPs were not only correctly sized, but also correctly designed in other aspects so that they are effective in pollutant removal. |
| Implement BMPs close to pollutant sources when feasible | F.1.b.2.a.xiii | - | This requirement was included to encourage the abatement of pollutants at their source. This is generally a more cost effective strategy than large treatment systems downstream. It also generally provides additional benefits, such as aesthetics, habitat, and education. However, this requirement cannot always be implemented in all cases, and therefore is only required where feasible. |
| Ensure that post-development runoff does not contain pollutants which cause or contribute to an exceedance of water quality objectives or which have not been reduced to MEP | F.1.b.2.a.xiv | - | This is a basic requirement of the Tentative Order for all discharges. It is repeated here to emphasize the importance of site design and planning in improving urban runoff quality. |
| Implement structural BMPs which meet numeric sizing criteria | F.1.b.2.c | X | |
| Allow for structural treatment BMPs to be shared by multiple projects | F.1.b.2.c | X | |
| Volume based BMPs mitigate 85$^{th}$ percentile storm event | F.1.b.2.c | X | |
| Flow based BMPs mitigate flow from 0.2 inch hourly rainfall intensity or doubled 85$^{th}$ percentile hourly rainfall intensity | F.1.b.2.c | - | Criteria were developed for flow based BMPs using hourly rainfall data because flow based BMPs are limited by their flow capacity, as opposed to a volume capacity. Inclusion of criteria for flow based BMPs is widely supported. |
| Potential for development of equivalent method for calculating numeric sizing criteria | F.1.b.2.d | - | This requirement was included to provide the Copermittees discretion in how to calculate the volume or flow generated by the 85$^{th}$ percentile storm event |
| Develop procedure for pollutants or conditions of concern to be identified | F.1.b.2.e | - | This requirement was added, at the request of the Copermittees, to provide consistency in the application of SUSMPs between jurisdictions. |
| Develop a process for SUSMPs to be implemented | F.1.b.2.f | - | This requirement was added, at the request of the Copermittees, to provide consistency in the application of SUSMPs between jurisdictions. |
| Restaurants less than 5,000 square feet exempted from numeric sizing criteria and flow rate controls | F.1.b.2.g | X | |

| SUSMP Requirement | Permit Section | Included in LARWQCB SUSMP (as supported by SWRCB Order WQ 2000-11) | Discussion |
|---|---|---|---|
| Require waived projects to provide savings in costs to waiver fund | F.1.b.2.h | -* | *While a waiver fund is not included in the LARWQCB SUSMP, the SWRCB supports the concept of a waiver fund, as required by the Tentative Order, when it states "[t]he concept of a mitigation fund or 'bank' is a positive idea for obtaining regional solutions to storm water runoff." However, Order WQ 2000-11 proceeds to list several issues which must be resolved regarding a waiver fund. These issues are listed in the Tentative Order, and the Copermittees are provided one year to develop a waiver fund which addresses the issues, with an additional minimum of six months to implement the waiver fund. |
| Infiltration restrictions | F.1.b.2.i | X* | * Focusing infiltration of large volumes of water in small areas has the potential to adversely impact groundwater quality. For this reason, infiltration restrictions have been placed on the use of structural infiltration BMPs in section F.1.b.2.i. These restrictions are to apply to structural infiltration BMPs only. These restrictions on structural infiltration BMPs are appropriate and are based directly on USEPA guidance. The restrictions are predominantly recommended by the USEPA Risk Reduction Engineering Laboratory (USEPA, 1994). Other infiltration restrictions contained in the Tentative Order are based on restrictions used elsewhere, such as Los Angeles, the State of Washington, and the State of Maryland. Furthermore, the restrictions are supported by the SWRCB in Order WQ 2000-11. The Order states: "The Regional Board did consider the potential impacts to groundwater from infiltration, and included appropriate limitations and guidance on its use as a BMP." The limitations and guidance the SWRCB refers to in Order WQ 2000-11 include most of the restrictions on infiltration included in the Tentative Order.<br><br>To provide flexibility, the Tentative Order allows for Copermittees to develop their own infiltration restrictions. This is in line with the LARWQCB SUSMP approach, which<br><br>provides more guidance on infiltration, rather than restrictions (though the LARWQCB SUSMP contains several infiltration restrictions as well). |
| Develop criteria to control downstream erosion | F.1.b.2.j | X* | *The LARWQCB SUSMP requires that peak flow rates be controlled to protect downstream conditions. The Tentative Order has a similar requirement, but also requires that specific criteria be developed and included in model and local SUSMPs. Development of specific criteria will help ensure that downstream erosion is adequately addressed and will reduce inconsistencies between municipalities. |

References

Horner, 1994. Constituents of Sources of Water Pollutants in Highway Stormwater Runoff. Report to Natural Resources Defense Council, Los Angeles Office.

LARWQCB, 2000. Regional Board Comment on Proposed SWRCB Order WQ 2000-11. Cites USEPA funded study conducted by the County of Sacramento as identifying heavy metals in significant concentrations in urban runoff from retail gasoline outlets.

See "Response to Comments" document for other references.